DEFENSE INFORMATION INFRASTRUCTURE (DII)

COMMON OPERATING ENVIRONMENT (COE)

SYSTEM ADMINISTRATOR'S GUIDE
VERSION 2.0.0.1 DRAFT
(Windows NT)

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Defense Information Infrastructure (DII)

Common Operating Environment (COE)

System Administrator's Guide

Version 2.0.0.1

DRAFT

(Windows NT)

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Preface

The following conventions have been used in this document:

[HELVETICA FONT]   Used to indicate keys to be pressed. For example, press [RETURN].

`Courier Font`   Used to indicate entries to be typed at the keyboard, Windows NT commands, titles of windows and dialog boxes, and screen text. For example, choose the `Restart Computer` option.

"Quotation Marks"   Used to indicate prompts and messages that appear on the screen.

Italics   Used for emphasis.

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Section 1
Introduction

The Defense Information Infrastructure (DII) Common Operating Environment (COE) System Administrator's Guide for Windows NT describes the setup and maintenance of the DII COE for the Windows NT environment and specifically addresses the core components of the DII COE application.

This guide is divided into the following sections:

Section	Page
Introduction Summarizes the DII COE software environment and installation configurations and provides additional sources of information.	3
System Environment Describes the hardware requirements and operating system.	5
Operating Guidelines Explains startup and shutdown of the software and the hardware and lists database limits for various DII COE files.	7
System Installation Provides instructions for software installation.	9
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1.1   The DII COE System

The DII COE software environment consists of all running software—from startup to operation. The commercial software of the Windows NT Operating System and the Distributed Computing Environment (DCE) client runtime environment forms the foundation of the DII COE for Windows NT.

1.2 DII COE Functionality

The functions described in this document may not correspond with those available on a particular workstation. Factors that determine the availability of functions include:

- Local area network (LAN) classification

    - Workstation classification

    - User's account group, profile, and classification

    - Installed applications and segments.

1.3 Additional Sources of Information

Reference the following documents for more information about the technical requirements for using the DII COE to build and integrate systems and for installation instructions for the kernel COE, which is the minimal set of software required on every workstation:

- *DII COE Integration and Runtime Specification* Version 2.0, DII COE I&RTS:Rev 2.0, Inter-National Research Institute, October 23, 1995

- *DII COE Kernel Installation Guide* Version 2.0.0.1 DRAFT (Windows NT), DII.2.0.0.1.DRAFT.NT.IG-1, Inter-National Research Institute, June 14, 1996.

Section 2
System Environment

This section describes DII COE hardware components and operating system components for the Windows NT 3.51 Operating System.

2.1 Hardware Components

The software may reside on a single disk or across multiple disks.

- 80486 or higher with at least 16MB of RAM (12MB minimum is required for Windows NT)

- 3.5-inch high density floppy drive (required to install the software)

- 125MB minimum free hard disk space to provide sufficient swap space and room for temporary files.

  - NT Operating System 75MB

  - COE Runtime 10MB

  - Swap space and temporary files 40MB (recommended)

  - Tools 2MB (developer's only).

- 500MB free disk space recommended for segments and data

- Monitor

- Video display board supporting at least VGA 640 x 480 mode operation (SVGA 800 x 600 recommended)

- Keyboard

- Pointing device

- Two serial ports

- CD-ROM drive.

2.2 Operating System Components

- Windows NT 3.51 Operating System CD-ROM

- Windows NT 3.51 Service Pack 3 or later.

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Section 3
Operating Guidelines

This section provides operating guidelines for powering up and powering down the system.

3.1 Power Down

1. Log out if you are currently logged in to the system. To do this, press [CTRL+ALT+DEL], which brings up a window with an option to log out.

2. Press [CTRL+ALT+DEL] to bring up the `Welcome` dialog box when log out is complete.

3. Select `Shutdown` from the `Welcome` dialog box. The `Shutdown Computer` dialog box appears.

4. Select `Shutdown` from the `Shutdown Computer` dialog box. The computer saves data and shuts down.

5. The `Shutdown Computer` dialog box appears with an option to restart the computer. Power-off the computer at this point or select `Restart Computer` to reboot the computer.

3.2 Power Up

1. Turn on the Uninterruptible Power Supply (UPS) if necessary.

2. Turn on the peripherals, including the monitor.

3. Turn on the computer.

4. Press [CTRL+ALT+DEL] when the `Welcome` dialog box appears.

5. Type your name and password in the `Welcome` dialog box and then press [ENTER] or select `OK`.

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Section 4
System Installation Oerview

4.1   Installing the Windows NT Operating System

Refer to the *DII COE Kernel Installation Guide Version 2.0.0.1 DRAFT (Windows NT)* for information about installing the Windows NT Operating System.

4.2   Installing the DII COE Windows NT Kernel

Refer to the *DII COE Kernel Installation Guide Version 2.0.0.1 DRAFT (Windows NT)* for information about installing the DII COE Windows NT kernel.

4.3   Installing the DII COE Windows NT Developer's Toolkit

Refer to the *DII COE Kernel Installation Guide Version 2.0.0.1 DRAFT (Windows NT)* for information about installing the DII COE Windows NT developer's toolkit.

4.4   Installing Segments

Refer to the *DII COE Kernel Installation Guide Version 2.0.0.1 DRAFT (Windows NT)* for information about using the COEInstaller tool to install segments.

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Section 5
System Administration Utilities

Many system administration functions are built in to the Windows NT Operating System. This section describes how to access system administration functions from the Windows NT Program Manager desktop. It is beyond the scope of this document to describe all of the Windows NT system administration functions; instead, this section provides a brief description of relevant utilities. For more in-depth information, refer to a Microsoft Windows NT users manual.

5.1 System (Printing) Options

Most printing functionality is invoked by double-clicking on an icon to invoke a program. The Windows NT Print Manager tool is invoked by double-clicking the `Print Manager` icon contained in the `Main` Program Group (the `Main` Program Group is opened by double-clicking on the `Main` Program Group icon). Any currently installed printers appear as windows inside the `Print Manager` window. This window contains the `Printer` Menu and the `Document` Menu.

5.1.1   Printer Menu Options

Create Printer Option

This option allows a printer to be added. Selecting the `Create Printer` menu option brings up a `Create Printer` dialog box. The appropriate fields must be set to describe the printer `Name`, `Driver`, `Description String`, and `Printer Port`.

Remove Printer Option

This option allows a printer to be removed. Click on the window of the printer inside the `Print Manager` window for the printer to be removed. Then select `Remove Printer` and answer `YES` when prompted to confirm removal.

Connect Printer Option

This option allows connection to any printer on the network configured as a shared network printer.

Properties Option

This option allows modification of the parameters entered when a printer was created.

5.1.2   Document Menu Options

Remove Document

This option allows a document to be removed. Select the document in the printer window of the `Print Manager` to be removed. Select the `Remove Document` menu option. Answer `YES` when prompted to confirm removal.

5.2 Hardware Options

Hardware options supported by the Windows NT Operating System include `Shutdown`, `Reboot`, and the `File Manager`.

5.2.1   Shutdown Option

Follow the procedures detailed in Section 3.1 to shutdown the computer.

5.2.2   Reboot Option

Follow the procedures detailed in Section 3.2 to reboot the computer.

5.2.3   File Manager Option

The File Manager utility provides the following system management functionality:

- Copies or moves files

- Deletes files

- Formats floppy diskettes

- Displays hard disk space availability

- Connects to network drives

- Shares file directories onto the network.

The File Manager is invoked by double-clicking on the `File Manager` icon in the `Main` program group. The `Window` menu option of the `File Manager` allows multiple windows to be opened simultaneously. Each window represents a single directory and displays its files and subdirectories. The File Manager allows the user to copy or move files, delete files, format disks, check which disks are available, connect to network drives, and share local disks on the network.

Copying or Moving Files

Files can be moved or copied using one of two methods: using the menu or dragging and dropping. To use the menu, click on the file or directory to be copied, and then select `Copy` or `Move` from the `File` menu. Enter the destination in the `Move` or `Copy` dialog box and select `OK`.

To use the drag and drop method, use one window from which the file or directory will move and another window to which the directory will move. Position the mouse pointer over the directory or file to move from, hold down the left mouse button, drag the image over the top of the directory in the destination window where the file should be moved, and release the mouse button. To copy the file instead of moving it, hold down the [Ctrl] key while performing the operation.

> NOTE: When transferring files between disks, the files will always be copied. It is not possible to move files between disks in a single operation.

Deleting Files

To delete a file or directory, select the file or directory by clicking on it once. Select `Delete` from the `File` menu. Select `OK` in the `Delete` dialog box.

Format

To format a floppy diskette, insert it into drive `A:` or `B:`. Select the correct disk drive to be formatted by clicking the appropriate drive symbol from the symbols located beneath the `File Manager` toolbar. Select `Format Disk` from the `Disk` menu and answer `YES` to the `Format Options` dialog box to format the floppy diskette.

Hard Disk Availability

To check hard disk availability, select the hard disk by clicking the appropriate drive symbol from the symbols located beneath the `File Manager` toolbar. The free disk space and total disk space appear in the lower-left corner of the `File Manager` window.

Connect to Network Drive

The `Connect Network Drive` option of the `Disk` menu brings up the `Connect Network Drive` dialog box. A list of all available file systems on network computers appears after a short delay. Double-click on the desired network computer to list the available file systems. Select the desired file system and then select `OK` to connect to that drive. The local drive specifier can be changed from the default next available drive by clicking on the `Drive` field and selecting a new drive specifier.

The newly connected drive can then be accessed by its appropriate drive specifier.

Sharing File Directories

To give other users on the network access to a directory, select that directory in the window by clicking on it once, and then select `Share As` from the `Disk` menu. Click `OK` in the `New Share` dialog box to share the drive. You may control access to this shared drive by using the `Permissions` button in this window.

5.3 Segment Installation Option

The `DII Installer` icon can be run from the System Administration account group. To install a segment, double-click on the `DII Installer` icon. The `Welcome` window appears (see Figure 1).

Select the `Next` button to continue with the Setup program, or select the `Cancel` button to quit the Setup program and exit any programs you have running. If you select `Next`, the `Segment Installer` window appears (see Figure 2).

To install software, follow the steps below:

STEP 1.   Select the installation device by clicking on the `Source Drive:` field. This field allows the user to select the device to use as the installation source drive. The device selection defaults to a drive on the local machine.

STEP 2.   Read the contents of the selected installation device by selecting the `Read TOC` button. The media will be scanned for the segments that it contains, and then the segments that the media contains will appear in the `Installation Segments` portion of the `Segment Installer` window. Any number of segments may be selected in this window.
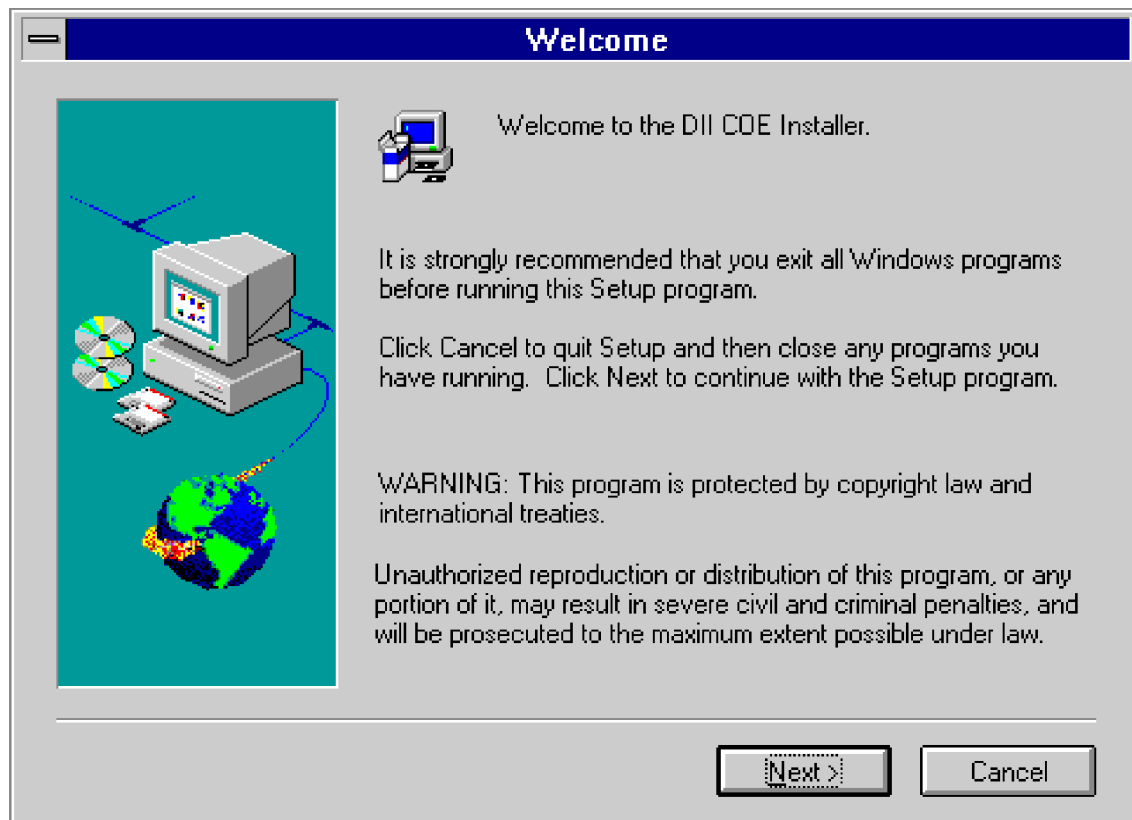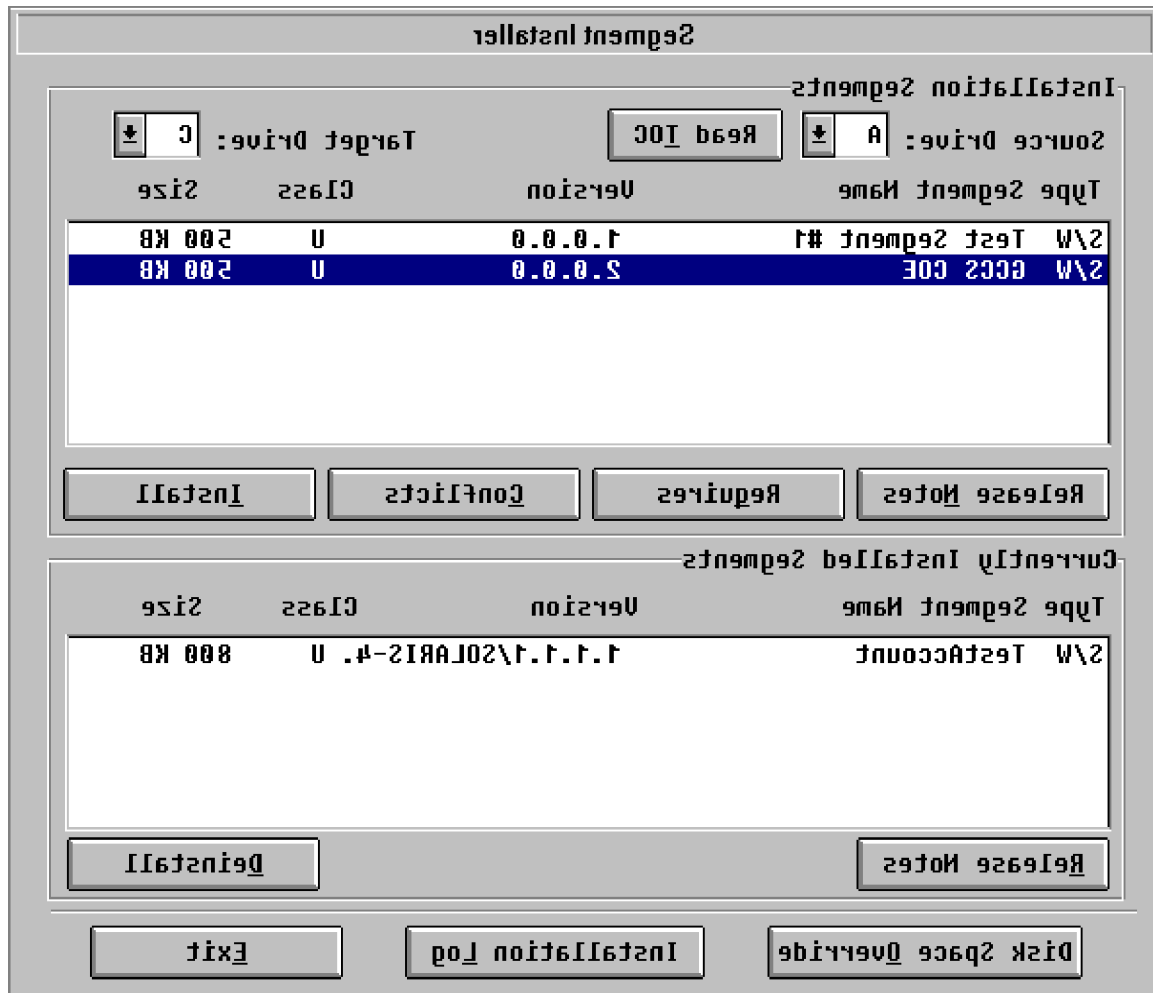
Figure 1. Welcome Window

Figure 2. Segment Installer Window

STEP 3.   Select the `Requires` button to display any required segments or patches that must be installed in conjunction with a selected segment. Only one segment may be selected at a time. The `Segment Requires` window appears (see Figure 3).

STEP 4.   Select the `Conflicts` button to display any segments or patches that cannot be installed in conjunction with a selected segment. Only one segment may be selected at a time. The `Segment Conflicts` window appears (see Figure 4).

STEP 5.   Select the `Release Notes` button to display information about a specific segment or patch. Only one segment may be selected at a time. The `Release Notes` window appears (see Figure 5).

STEP 6.   Select the segments that you want to install from the `Installation Segments` portion of the `Segment Installer` window.
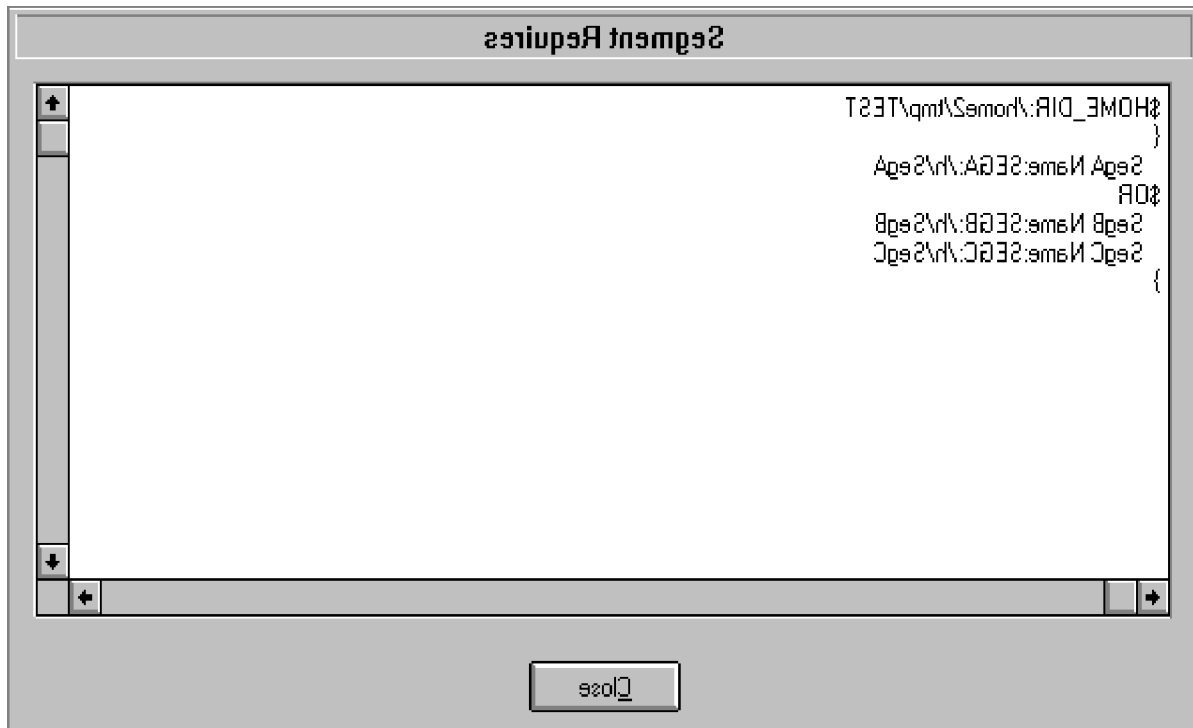
Figure 3. Segment Requires Window
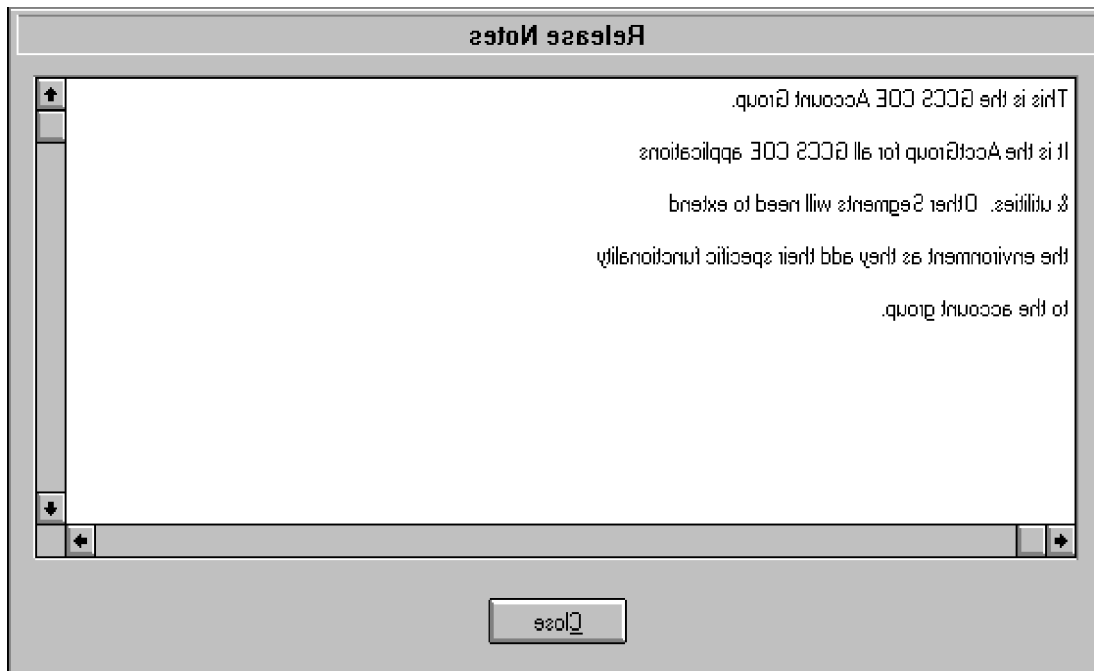

Figure 4. Segment Conflicts Window

Figure 5. Release Notes Window

STEP 7.   Select the target device from the `Target Drive`: field. Only non-removable drives including network drives are available for installation.

NOTE: The system automatically reserves a space capacity of 80 percent for disk usage on each available disk. Select the `Disk Space Override` button to override this space restriction. The `Disk Space Override` window then appears (see Figure 6), which allows the user to modify the reserved disk space for this installation.

Figure 6. Disk Space
  Override Window

STEP 8.   Click on the `Install` button once all desired segments are selected to begin the installation process for those segments. The user receives a prompt to enter the floppy disk from which the desired segments will be installed. Once the desired segments are installed, they appear in the `Currently Installed Segments` portion of the `Segment Installer` window.

STEP 9.   Select the `Installation Log` button once the installation is complete to display a detailed log of the installation process (see Figure 7).
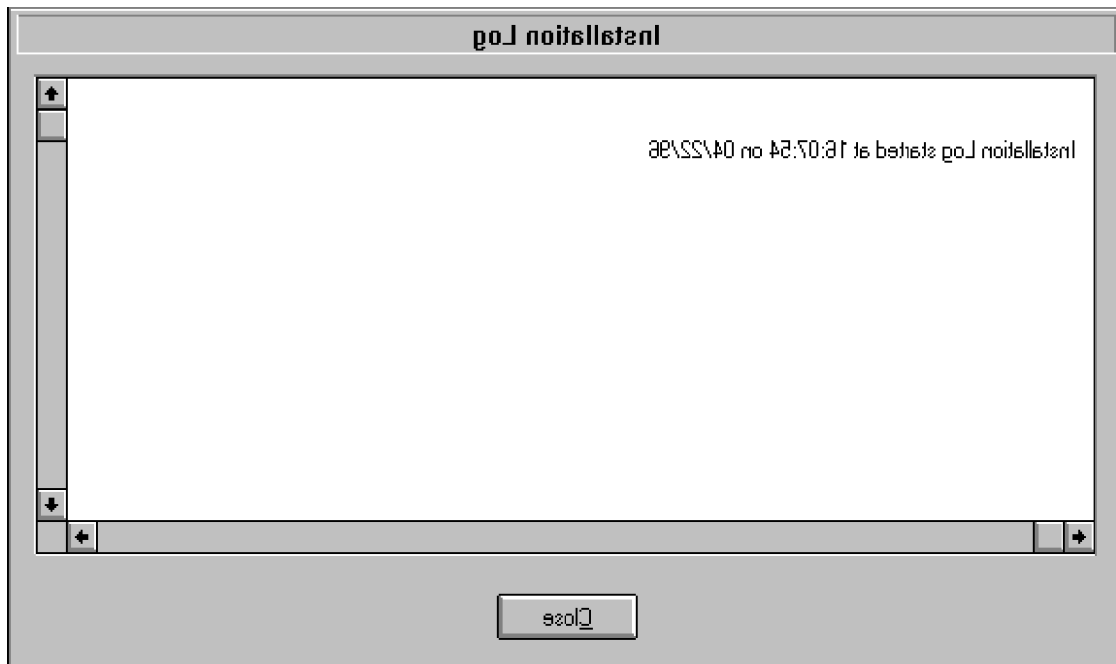

Figure 7. Installation Log Window

STEP 10.   Select `Exit` from the `Segment Installer` window to end installation/deinstallation of segments. A dialog box appears with the following prompt: `Are you sure you wish to exit DII Installer`. Select `YES` to exit the installer or `NO` to return to the Installer.

5.4   Network Options

Windows NT network options are provided through a variety of tools. These tools allow the user to change the machine ID, edit local hosts, and set the system date and time.

5.4.1   Change Machine ID Option

To change the machine name, double-click on the `Network` icon in the `Control Panel` group of the `Main` group to bring up the `Network Settings` dialog box. Select the `Change` option next to the `Computer Name` field. Select `OK` to accepts the changes.

5.4.2   Edit Local Hosts Option

No option is provided to edit local hosts. Invoke the Windows NT notepad editor by double-clicking in the `Notepad` icon in the `Accessories` program group. Then open `C:\WINNT35\SYSTEM32\DRIVERS\ETC\HOSTS` and edit hosts as required.

5.4.3   Date and Time Option

To change the system date and time, double-click on the `Date/Time` icon in the `Control Panel` group of the `Main` group. Edit the `Date`, `Time`, and `Time Zone` fields as required, and select `OK` to enable the changes.

5.5 Account Management (User Manager) Options

The `User Manager` option provides Windows NT account management. This option is invoked by double-clicking on the `User Manager` icon in the `Administrative Tools` program group. This option allows the system administrator to add users, provide new names for users, change user passwords, and grant system rights.

5.5.1   User Menu Option

New User Option

The `New User` menu option brings up the `New User` dialog box. Enter the appropriate information in the `Username`, `Full Name`, `Description`, and `Password` fields. Selecting `Groups` allows the new user to be assigned as a member of a current group.

Delete Option

The `Delete` menu option allows the system administrator to delete the currently selected user.

Rename Option

The `Rename` menu option allows the system administrator to rename the currently selected user. After the `Rename` menu option is selected, the `Rename User` dialog box appears, which prompts for a new name for the user.

Properties Option

The properties menu option allows the system administrator to change the password, password properties, username, description, group membership, and location of login profile for any user.

5.5.2   Properties Menu Option

Account Option

The `Account` menu option allows the system administrator to change the policies of the account, such as time for password to expire, minimum password length, and lockout after several bad log on attempts.

User Rights Option

The `User Rights` menu option allows the system administrator to grant rights to various system functions. Examples of rights include accessing the computer from the network, setting the system time and date, and shutting down the computer.

Audit Option

The `Audit` menu option allows the system administrator to control the logging of system events (e.g., log on, log off, and file access). These events are written to the system event log.